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ABSTRACT

The adjacent utterances of three mothers and their children, aged 22.5 to 26.5 months, were recorded and analyzed. Each mother was found most frequently to express the same semantic-syntactic relation as did her child in the preceding utterance. This correspondence appeared to be independent of the parent utterance which preceded the matching pair. This pattern suggests that parent use of new linguistic structures directed to the child follows some indication in the child's language that he/she is cognitively prepared to understand them. The second major finding was that the mothers' responses co-varied with the relative accuracy and completeness of the child's utterance. Semantically, but not syntactically, inaccurate utterances were corrected more frequently than accurate utterances. Functionally incomplete utterances were more frequently followed by expansions than by questions: responses to single word utterances showed the reverse pattern. It is suggested that accelerated development in terms of mean length of utterance may be reflective of relative proportions of single and multiword utterances in the child's speech and of mothers' tendency to expand the two types of utterances to a greater or lesser extent. (JB)

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The Relationship Between Child Utterances and Parent Responses*

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Despite extensive research in child language, the answer to the question of how children learn language remains elusive. On one level, this answer has been pursued through the investigation of input in the child's linguistic environment; and most recently, this study has been in conjunction with the characteristics and growth of the child's language. This combined study attempts to answer the question more clearly in that, by looking at the two known quantities (the environment and the child's language output), more educated guesses about the process of language acquisition may be made. This input research also attempted to clarify various claims about the relative contributions of the child's innate structures and the fitness of the environmental stimuli for such a complex task.

As a result, there is a great deal of information about the characteristics of parent language to children in terms of how it is different from adult language to other adults, and how child language relates to it. With respect to semantic content, adult language to children has been found to be similar to that of the child, with the parent primarily expressing constructions which the child already knows and uses (Snow, 1977a, Van der Geest, 1977). Additionally, some researchers have described characteristic parental response patterns, sometimes called discourse features, such as expansions, modelling, extensions, and imitations (Brown, Cazden and Bellugi, 1969, Newport, 1976). Parental questions have also been studied in detail by Holzman (1972).

The results of these studies, which characterized the differential nature of adult language to children, led to some hypotheses about how this language served to help children learn language. Most recently, studies such as those by Newport, Gleitman and Gleitman (1977), Cross (1978) and Furrow, Nelson and Benedict (1979) have explored the relationship between certain aspects of parent language and child language growth. Newport et al. concluded that only the growth of "language specific" aspects of child language appeared to be related to surface characteristics of parent language. Furrow et al. concluded that a simpler communicative style (described specifically with respect to syntactic, semantic and stylistic characteristics) was positively related to language growth. Cross (1978) studied the parent language of two groups of children, those with normal language growth and those with accelerated growth. She found that the mothers of the children with accelerated language used more expansions, extensions, partial repetitions and a combination of repetitions and expansions than did the mothers of the children with normal language development.

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What the results of these studies suggest is that some of the characteristics which serve to differentiate adult language to children from that to adults do appear to function as environmental aids in first language learning. An important consideration in the question of parent-child language interaction is the other side of the coin -- the effect of the child's language on that of the parent. Although it is generally recognized, it has been investigated only on a general level (Phillips, 1973 and Snow, 1972 and 1977b).

The goal of the present study was to describe in more detail some of the semantic-syntactic and discourse characteristics of parent language and how they relate to variations in child language within each child-parent utterance pair.

Method

The subjects of the study were three mother-child pairs. All the children were male, between the ages of 22.5 months and 26.5 months with mean lengths of utterance of from 2.0 to 2.5 at the beginning of the study. They were all only children with normal hearing and pre- and post-natal histories. The mothers had all completed college, and each was her child's primary caregiver.

The data collected from the three child-parent pairs consisted of transcribed audio tape recordings of naturalistic interactions in their homes, with contextual notes. Two sets of observations were made of each dyad separated by a three month interval.

The six thousand pairs of adjacent child-parent utterances were analyzed as follows. The parent responses were categorized for response style (extension, expansion, question, imitation, affirmation, correction, etc.) and semantic-syntactic relation(s). The child utterances were categorized as to their completeness (complete or type of incompleteness), accuracy (accurate or type of inaccuracy) and semantic-syntactic relation(s). The paired parent and child data were then crosstabulated to demonstrate the co-occurrence of each parent category type with each child category type for the preceding child utterance. Chi-square tests of significance were then performed on the tables.

Results and Discussion

The results of this study suggest that certain characteristics of parent language may be related to the content or form of the child's language. One major finding was a strong correspondence between the semantic-syntactic relations expressed in the child's utterance and those of the parent's response. Specifically, each mother most frequently expressed the same semantic-syntactic relation as did her child in the preceding utterance. This relationship is shown in the crosshatched columns in Figure 1 for some of the most frequently occurring semantic-syntactic relations. The dark areas superimposed

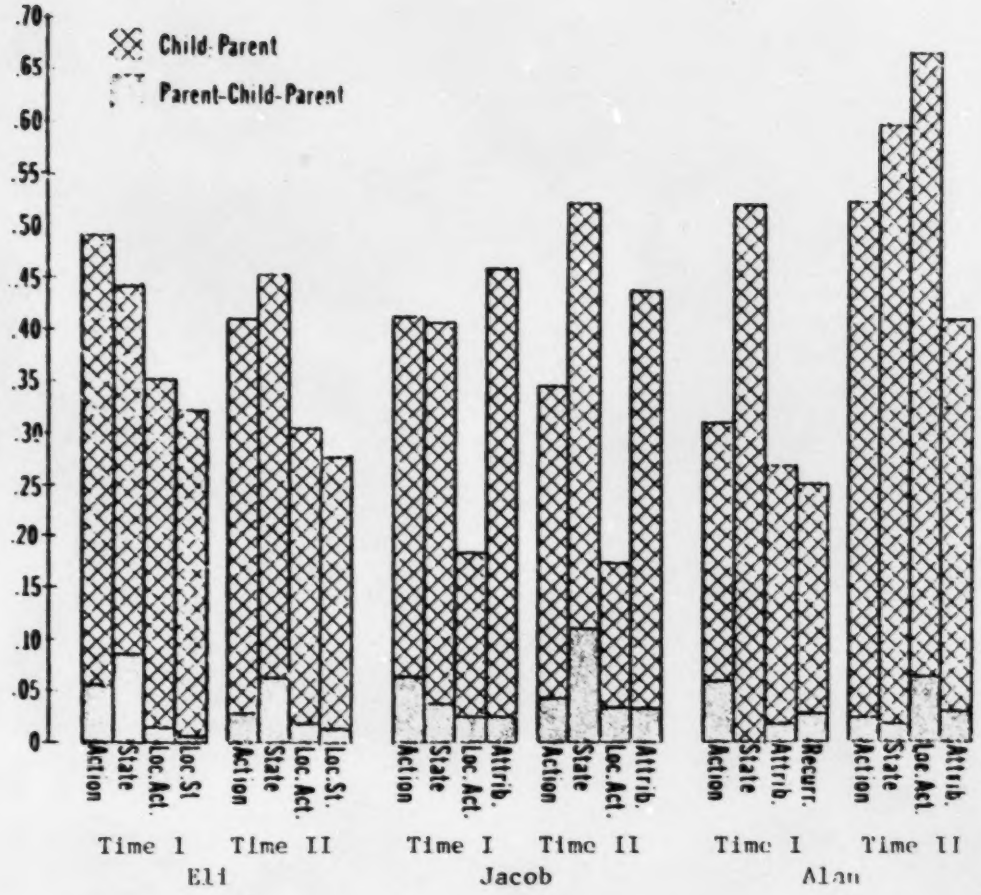

Figure 1. Percentages of Child-Parent and Parent-Child-Parent Utterance Sequences with the same Semantic-syntactic Relation for each Subject Pair at Times I and II.

on the columns represent the proportions of parent-child-parent utterance triads in which all three utterances shared the same semantic-syntactic relation. This shows that the correspondence between the child utterance and the following parent response appeared to be independent of the parent utterance which preceded the matching child-parent utterance pair.

What this suggests is that the parent is following the child's lead, at least with respect to semantic relations. As noted earlier, other researchers (Snow, 1977a and Van der Geest, 1977) have found a similarity in the general semantic relations of parent and child. This finding of semantic-syntactic correspondence from child to parent strongly suggests that this general similarity is probably a reflection of the parent following the child at the level of the utterance pair. This finding is also consistent with other research which has

concluded that parents are sensitive to the language of their child. What it adds to that conclusion is that this sensitivity seems to be quite specific in that these mothers appeared to be attending to the content of each child utterance and formulating each response accordingly.

This finding also raises some questions about the parent's role as a language teacher who specifically initiates new linguistic items. Of course, new relations do become a part of the child's linguistic system, and undoubtedly this is related to their presence in the parent's language. But the very strong pattern of parent following child particularly in terms of the content of the child's language, suggests that specific use of new linguistic structures directed to the child probably follows some indication in the child's language and behavior that he is cognitively and linguistically prepared to understand and use them.

The second major finding was that the mothers' responses co-varied with the relative accuracy and completeness of the child's utterance. Not surprisingly, semantically inaccurate utterances, that is, utterances which did not accurately represent the truth of the situation, were corrected significantly at .001 more frequently than accurate utterances. This was also noted by Brown, Cazden and Bellugi (1969). On the other hand, syntactically inaccurate utterances were not corrected any more frequently than accurate utterances, and this suggests greater parental attention to content than form.

The findings with respect to the completeness of the child's utterance demonstrate variable attention to the form of the child's language. Most of the children's utterances were incomplete in that they were missing function words (telegraphic) or they were single word utterances. The mothers' responses to these two types of incomplete utterances varied significantly with respect to expansions and questions. Functionally incomplete utterances were more frequently followed by expansions and less frequently by questions. Responses to single word utterances showed the reverse pattern -- they were more frequently followed by questions and less frequently by expansions. These findings were significant at .05 and .01 respectively for two children at least at one time and at both times at .001 for the third child. This relationship is shown for two of the children in Figure 2. The relative proportions of expansions for these two types of utterances is superimposed on the columns of incomplete and single word utterances.

The association of expansions and telegraphic utterances has been noted by other researchers (Nelson, 1973 and Cross, 1978) particularly at this MLU level (2.0 - 2.5). Further, both Cross and Lieven (1978) noted differences in the levels of expansions between the mothers of accelerated and normal language learners in that expansions occurred more frequently with accelerated children. Cross hypothesized that expansions (among other patterns) serve to "assist the child to acquire linguistic structure." (p. 210) The second finding in the

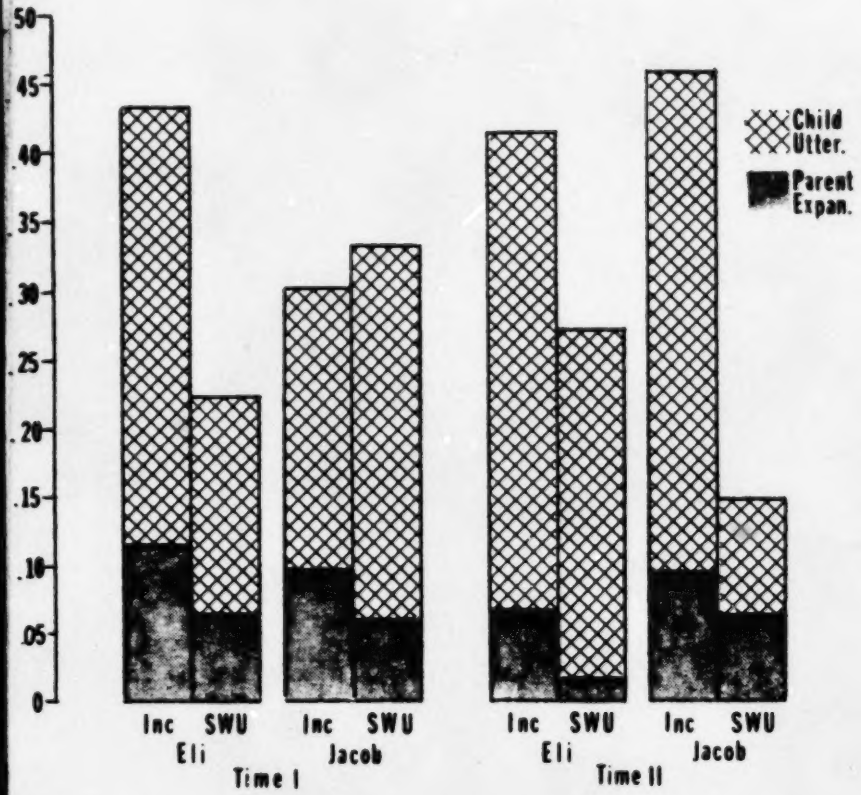

Figure 2. Proportions of Expansions of Incomplete and Single Word Utterances for Eli and Jacob at Times I and II.

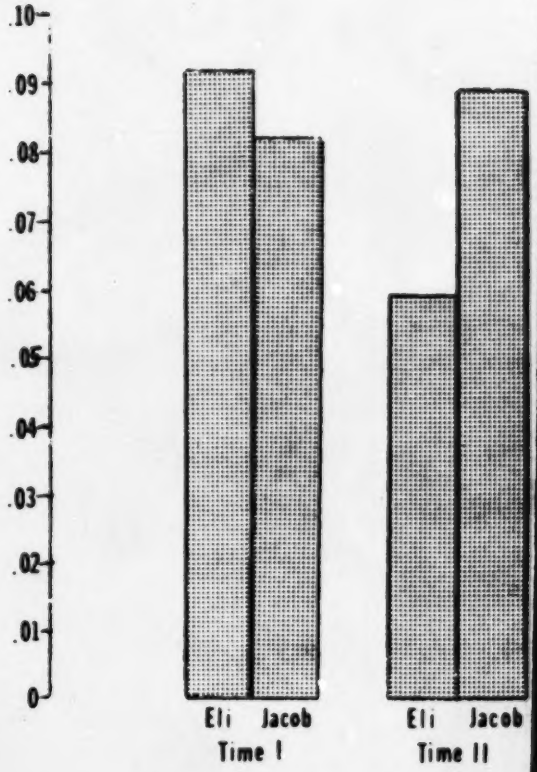

Figure 3. Proportions of Total Expansions for Eli and Jacob at Times I and II.

present study suggests a different explanation for the association between expansions and accelerated language growth.

Two of the children in the present study are respective representatives of Cross' definitions of an accelerated (higher MLU at the same age) and normal child. Figure 3 shows the total expansions for each boy's mother at each time. At Time I, Eli, the accelerated child, was receiving more total expansions than Jacob, the normal child. At Time II, this was reversed; Jacob was receiving more expansions than Eli. (Eli's accelerated status had not changed.) The difference between the two times can be seen in the relative proportions of functionally incomplete and single word utterances in each child's utterance set as shown in Figure 2. The proportion of Eli's incomplete utterances was greater and his proportion of single word utterances was less than Jacob's at Time I, whereas at Time II the relationship was reversed. Therefore, the differences in the total expansion rates appeared to be a reflection of the relative proportions of these two types of child utterances and the mothers' tendency to expand these two types of utterances to a greater or lesser extent.

This suggests that if the accelerated children in the Cross study were using relatively more incomplete utterances and relatively fewer single word utterances than the normal children, her finding on expansions may be related more to the mothers' differing levels of expansion with these two types of child utterances than to the parents' influence on the rate of child language growth. The example illustrated in Figures 2 and 3 is a single instance and as such, it is not intended to represent a fully researched hypothesis. But it does serve to raise questions about some of our conclusions about the nature of parent language and its role in child language.

It also raises some questions about methodology. Some studies have attempted to account for the influence of the child's language through statistical means in recognition of the need to control for its effects on parent language (Newport et al., 1977 and Furrow et al., 1979). The above example reinforces that need. It also suggests that the control may be best resolved by studying the interactions at the level of the individual utterance pair. There is precedence for this method in the studies of discourse patterns (Keenan and Schieffelin, 1976 and Bloom, Rocissano and Hood, 1976). It may well be that such a method of investigation will demonstrate the details of the relationship between the environment and the language learning child while providing a straightforward means of deriving the specific variables which need to be controlled.

Conclusions

The two major findings of this study, the semantic-syntactic correspondence from child to parent and the influence of the child's language forms on parental discourse features show that some general characteristics which have been described in parent-child language (such as similar content and parent sensitivity to child language

level) also prevail on an individual utterance level. These findings also add to the details about what characteristics of child language seem to be related to the modifications which parents make in speaking to children.

Finally, these results present some answers and raise more questions for those of us who are interested in learning more about the effects of parent input on child language. Unfortunately, these results may complicate the task, because they suggest that the variation which has been found in parent language may, to an unknown extent, be a reflection of each parent's sensitivity to his or her own child. This is not to suggest that parent language does not influence child language in many ways, it is certainly likely that it does; but it does suggest that in the process of evaluating the various factors in parent language and their relationship to child language growth, the influence of the child's language on that of the parent, and the interactions at the level of the individual utterance must also be considered as important factors.

*This research was part of the author's doctoral dissertation while at Columbia University. Requests for reprints should be addressed to: 100 Woodside Drive, San Anselmo, CA 94960.

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